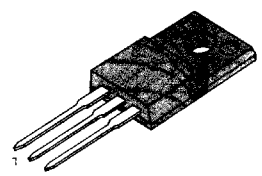
KSD2012 NPN EPITAXIAL SILICON TRANSISTOR

LOW FREQUENCY POWER AMPLIFIER

• Complement to KSB1366

TO-220F



1. Base 2. Collector 3. Emitter

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	60	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_C	3	A
Base Current	I_B	0.3	A
Collector Power Dissipation (T_C=25℃)	P_C	25	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (T_C =25℃)

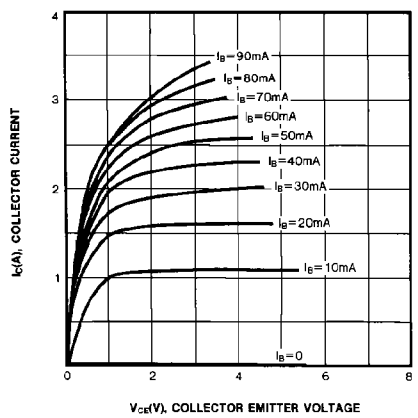
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C = 50mA, I_B = 0	60			V
Collector Cutoff Current	I_{CBO}	V_{CB} = 60V, I_E = 0			100	uA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 7V, I_C = 0			10	uA
DC Current Gain	h_{FE1}	V_{CE} = 5V, I_C = 0.5A	100		320	
	h_{FE2}	V_{CE} = 5V, I_C = 3A	20			
Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C = 2A, I_B = 0.2A		0.4	1	V
Base Emitter On Voltage	V_{BE}(on)	V_{CE} = 5V, I_C = 0.5A		0.7	1	V
Current Gain Bandwidth Product	f_T	V_{CE} = 5V, I_C = 0.5A		3		MHz

h_{FE}(1) CLASSIFICATION

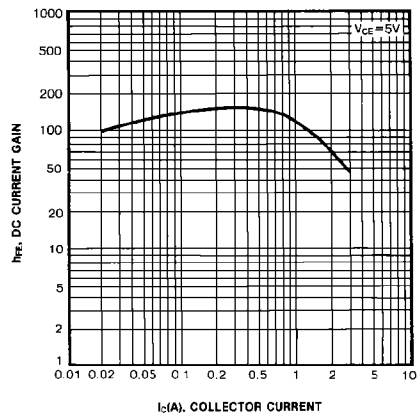
Classification	Y	G
h_{FE1}	100 ~ 200	150 ~ 320

SAMSUNG ELECTRONICS

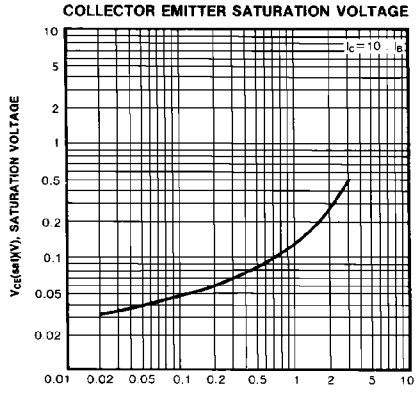
STATIC CHARACTERISTIC



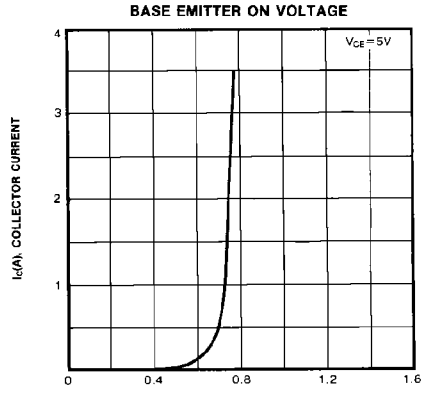
DC CURRENT GAIN



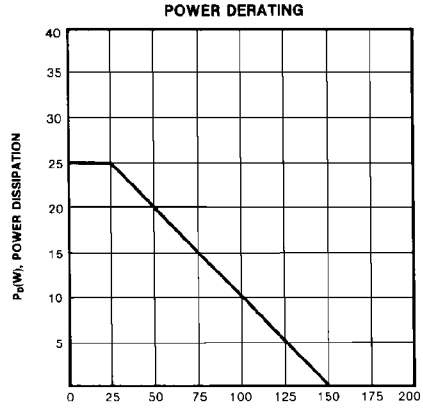
COLLECTOR EMITTER SATURATION VOLTAGE



BASE EMITTER ON VOLTAGE



POWER DERATING



SAFE OPERATING AREA